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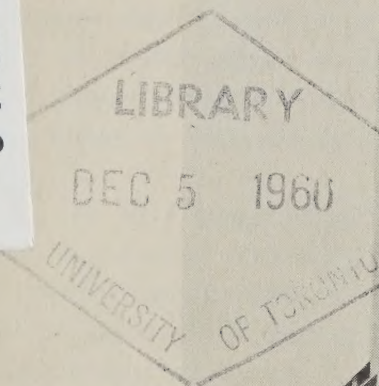
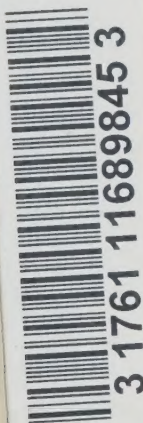


CIVIL

DEFENCE

C A N A D A

[no 85]



This mobile display, constructed by the Metropolitan Toronto Civil Defence Organization, was used to excellent effect in showing a full-size basement fallout shelter to thousands of citizens in the Toronto area.

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FOREWORD

The current issue of "Civil Defence - Canada" is possibly of unusual interest in that it represents a point of transition and a certain change of direction. This publication which has been the responsibility of the Department of National Health and Welfare and has been produced by Mr. Harvey Adams and his staff, is now the responsibility of the Emergency Measures Organization in the Privy Council Office. The publication will have a somewhat broader base than formerly in that it will deal with subject matter over the whole range of government itself, as well as planning directed toward action by individuals. This latter aspect has been traditionally the business of civil defence in Canada.

For several years past the problems of wartime continuity of government at all levels, including federal, provincial and municipal interests, have become of great concern. A publication of this sort to be most useful needs to cover the field of continuity of government as well as many other areas coming under the term "emergency measures". It is hoped that in consequence the extremely useful results arising from this bulletin will be enhanced.

It has been suggested by some that this might be an appropriate time to change the name of the publication to reflect the somewhat broader objectives to which it will be devoted in future. The present title "Civil Defence - Canada" is widely known. If it is understood that the publication will now devote its space to a considerably wider range of subject matter than is covered by "civil defence" itself, then it does not appear inappropriate to retain the present title, at least for the time being.

The current issue contains a number of articles indicating the nature and direction of emergency planning, particularly at the federal level. It is felt that this sort of information will be of general interest to all who have read "Civil Defence - Canada" previously and to those new readers who, it is anticipated, will be added.

It is the intention through subsequent issues to cover planning in the provinces and municipalities and various persons will be asked to contribute articles to this end. It is felt also that readers will welcome some indication from time to time of the nature of emergency planning in other countries as well as in Canada, and particularly in the NATO countries.

It is hoped also to introduce some notes on people who are engaged in the whole range of emergency planning, including civil defence, and some newsworthy comment on these people.

The various provincial and local publications, including several excellent bulletins on civil defence matters, will possibly furnish comment from time to time that can be given wider attention through re-printing in "Civil Defence - Canada".

It is our wish and purpose in continuing this publication to maintain, if possible, the high standards always evident in the work of Mr. Adams and his staff.

A. B. Curry

CIVIL EMERGENCY PLANNING

Rt. Hon. John G. Diefenbaker, Prime Minister of Canada, during discussion on Emergency Measures estimates in the House of Commons on 10th August, 1960, made a statement on the policies, scope and progress of civil emergency planning. Highlights of that statement are repeated here for the information and interest of all concerned in this field.

"Whatever our feelings may be as to the international situation, fear still hangs over the hearts of men everywhere in the world. Planning for a war emergency has had to be continued. It is not based on any considered view that war is more likely or more imminent, but simply on the conviction that it is prudent that realistic planning should go forward by governments and by individuals against the possibility of nuclear attack on Canada.

"Following a conference of federal and provincial representatives on the subject last October the proposed rearrangements which were in the planning stage a year ago were accepted by the provinces. All concerned in the civil defence functions have put a great deal of thought and effort into their program since that time. Aided by the doubling of funds provided by this government under the civil defence financial assistance program the provinces and many municipalities have developed extended and intensive plans to meet not only a wartime emergency but also natural disasters which might strike our people suddenly and without warning. These plans are reflected in the projects which have been submitted during the current year.

"The departments concerned most immediately with this matter are the privy council, national defence, national health and welfare and justice. The privy council office, whose activities are now before the committee, is the co-ordinating agency in this field. It deals with these departments in all aspects of their planning as well as with all other federal departments and agencies having responsibilities in this field, and with the provinces.

"The role of E.M.O. in respect to civil defence is to ensure that all planning bodies work to clearly defined objectives with dispatch and without gaps or overlaps. The efficacy of the arrangements made last year comes under review constantly. Close examination occurs at the

time of national exercises, such as the one held in May of this year, and at conferences of federal and provincial ministers such as that held in October, 1959. National exercises and conferences will be repeated from time to time as the need for them arises.

"One aspect of civilian emergency planning, is the home shelter programme. Useful and practical information on the construction of basement fallout shelters is now being provided throughout Canada. It seems to be generally agreed among those who have given study to the question that the greatest danger to the greatest number of Canadians in nuclear war is radioactive fallout.

"From time to time one hears two views, both of which are negative and dangerous in that they counsel Canadians to do nothing in the face of possible danger. On the one hand it is alleged that nuclear war is so awesome in character that it will never occur. On the other hand it is said that if it does occur all, or nearly all, of our people will inevitably perish. Those who have made a thorough study of this subject believe that both these points of view are wrong. If there is a nuclear attack on Canada a great deal can be done by the government and by individuals to enable this country to survive the awful terror of nuclear war.

"The provision of various types of fall-out shelters as a measure of prevention is necessary. Some say that there would be no survival anyway. That is not the opinion of those who have the responsibility of civil defence in our country or in other countries in the free world. I believe that each and all of us should make provision in this regard. In the Prime Minister's home which belongs to the people of Canada there will be provided such a basement shelter. I think generally speaking among those who have responsibilities in government or in opposition action in this regard is simply a necessity with full regard to all the circumstances.

"Last year I spoke of the continuity of government in wartime. We have endeavoured to make provision in that regard to the end that if we are struck by a nuclear attack without warning the government of the country shall be continued. This matter engages the attention of departments and agencies of the federal government as well as provincial and municipal authorities. Provision must be made for suitable accommodation and essential communications. The functions to be carried on in an emergency must be determined now and the individuals who will be concerned must be selected and trained. The government has plans for central, regional and zonal facilities to ensure continuity of government in the event of attack. I wish to report that these plans have gone

forward not only nationally but regionally with the co-operation of the provincial governments. In all of the provinces the necessary facilities will be provided.

"The central facilities will be staffed by federal civilian personnel and by the army. It is planned that each regional centre will be occupied also by persons representative of the public service of provincial government. E.M.O. is currently engaged in working out with provincial authorities the relation between federal and provincial wartime responsibilities in order to ensure the best possible working arrangements.

"In charge of the organization is the Prime Minister or acting prime minister, and with him the other key ministers to whom I have already referred. The federal civilian group and the army group will be given orders from the national headquarters. They will have the authority, of course, to take certain measures on their own responsibility. If they are cut off from the centre they will have the authority to act on their own.

"There will be in each regional centre a senior representative of the federal government who will immediately assume this important task if and when war breaks out. He will have full authority to act when necessary on behalf of the federal government. In addition, of course, we shall have the army commanders exercising their authority over military operations but subject at all times to the direction of the government, either directly or through the regional representatives.

"Various federal departments are involved in plans for continuity of government. Two or three examples may suffice. National health and welfare has expanded and intensified its emergency planning in both health and welfare in order to aid provinces to make more ample provision in these fields. The Department of Transport has created a new agency, the emergency national telecommunications organization, to plan in detail the controls required in that field in wartime. The Department of Defence Production has set up a planning body to develop the elements of a war supply agency charged with control over production, distribution and pricing of civilian and military supplies in wartime. In all these activities E.M.O. has a significant part in its role of co-ordination.

"While I would not wish to create the impression that all elements of emergency planning have been dealt with fully since there are some that arise as the problems receive study, I feel that the house would want the assurance that progress has been made in the period under review.

"The question of evacuation has been referred to on a number of occasions. What is the policy in this regard? The government has issued a statement of policy which was the subject of communication with the provincial premiers in November, 1959. In essence it recommended that the evacuation of probable target areas should be based upon a voluntary decision on the part of individuals and the probable target areas should develop traffic plans to facilitate whatever voluntary evacuation is likely to take place.

"Mention has already been made of the assistance under the National Housing Act in connection with the building of shelters. Some have suggested that the shelter will not protect. This fall-out shelter was designed by a team of government employees including scientists from the defence research board and the national research council. It is a proved scientific fact that a mass of dense material such as earth and concrete will reduce the intensity of radioactivity.

"Questions have also been asked with regard to who would be responsible for the implementing of civil emergency planning. That responsibility rests on the Prime Minister and also on the three federal departments to which I have already referred.

"Expenditures on civil defence have increased very greatly. In 1959-60 the total amount was \$10,028,345 and in 1960-61 it is \$36,824,500.

"Let me emphasize that the action being taken does not imply that we believe that war is imminent, but it would be less than wise for the Canadian people or for people anywhere in the free world not to take those precautions which can be taken now. All of us pray that the occasion will never arise when Canada or those nations associated with her in the free world will ever require to implement these plans of precaution. We in the free world pray there will be peace and we can cause those who from time to time threaten and bluster to realize that whatever number of survivors there may be, a nuclear war, if it did not destroy civilization, would at least set it back to the dark ages for generations to come.

"One does not like to bring before parliament a picture that in the twentieth century preparations have to be made for survival. What we are doing, what we have done, is designed not to constitute an attitude of defeatism, defeatism when measured in the light of the international situation, but rather the taking of that action which is a responsibility that rests on the shoulders of those who endeavour to discharge the responsibility of government."

SURVIVAL PLANNING

by

J. F. Wallace
Assistant Director
Emergency Measures Organization

The term 'survival planning' is presently used to denote that special range of problems which are directly related to those measures which are adopted to assist the survival of the population in the event of nuclear war. It is this range of problems which was previously grouped under the term 'civil defence'. In effect, therefore, survival planning includes those measures which were known as civil defence measures but, because of the tremendous destruction which could be wrought by nuclear war, the term 'survival planning' is probably more meaningful than the term 'civil defence planning'. Nevertheless, the terms are synonymous. Survival planning is, therefore, a part of civil emergency planning. The latter term also includes those programmes adopted to ensure continuity of government during emergency.

It is recognized that, of the three major levels of government in Canada which have emergency planning responsibilities, it is at the municipal level that the programmes of government continuity and survival planning merge so as to become, to a great extent, indistinguishable.

There are certain survival measures which were previously municipal responsibilities but which are now the responsibility of the Army. Briefly, these are:

- (a) the warning of attack;
- (b) the warning of fallout;
- (c) re-entry operations.

The ultimate success of municipal survival plans is, therefore, dependent upon the plans which are made by the Army, particularly as they relate to (a) and (b) above. The remainder of this article will be devoted to those matters which are civil responsibilities in the field of survival planning.

Preattack Evacuation[⊕] - The present government policy rules out compulsory evacuation of probable target areas, but it recommends that these areas develop plans which would facilitate the movement of any people who choose to move out of these areas should sufficient warning of attack be available. The actual decision to move out of a probable target area is left to the individual but once he had decided to go, he would have to conform to whatever traffic plan was put into effect by the municipality.

Because the possibility of direct attack on communities other than probable target areas is so slight, it is recommended that people in these communities plan to 'stay put'.

Remedial Evacuation - This is the term which is used to denote the evacuation of communities after it has been determined that the amount of fallout is so great that even if people were safe in fallout shelters, they would not be able to resume normal living outside of shelter, even on a controlled basis. Such evacuations would probably not take place until at least 48 hours had elapsed after fallout was complete. Because of the widespread nature of fallout, all communities should develop plans to implement remedial evacuation should it ever become necessary. No community should plan to evacuate on the basis of estimated or predicted fallout.

Shelters - In the event of nuclear war on this continent, a great number of Canadians may be affected by radiation fallout resulting from detonations either in Canada or in the United States. Because protection against fallout is relatively easy, the government has recommended a fallout shelter programme based on household fallout shelters and has two⁺ pamphlets on them. As study and research is completed, pamphlets will be issued on a wide range of shelters, fallout and anti-blast.

The present fallout shelters are designed to provide the maximum protection against all but the highest levels of radioactivity. These high levels of radioactivity will be experienced in very small, unpredictable areas. Anti-blast shelters can be designed to protect the occupants against all the effects of nuclear explosions except very close to ground zero.

[⊕]See also the Canadian Government Policy with Respect to Evacuation and Shelter.

⁺ Blueprint for Survival No. 1 - Your Basement Fallout Shelter by EMO.
Blueprint for Survival No. 2 - Your Basement Fallout Shelter by CMHC.

Emergency Services - The services are, in the main, the municipal services such as police, fire, engineers, health and welfare, supplemented by such other services which might have to be created in order to handle emergency functions such as rescue, radiological defence, communications, public information. Each emergency service must develop an emergency plan. In the case of probable target areas, these plans should, where necessary, be co-ordinated with Army re-entry plans for the area.

Emergency Broadcasting - A radio broadcasting plan has been developed, the details of which will be revealed shortly, which will ensure that emergency instructions can be broadcast over all populated sections of the country. People are advised to obtain a battery operated radio which has reception power to receive information from stations which might be as much as fifty miles away.

Although the Army is responsible for issuing warnings of attack or fallout, it is the responsibility of the provincial as well as some municipal authorities to issue the public action instructions to the population.

Emergency Communications - The Army is responsible for the provision of emergency communications for the federal/provincial emergency government headquarters in each province. The provinces and municipalities are responsible for the development of emergency communications facilities within the province in order that provincial or municipal operations can be effectively controlled.

Mutual Aid - Should probable target areas be attacked with little or no warning, the Army, in the conduct of re-entry operations, will require assistance from all communities which can provide it. Each community should, in the development of its emergency plans, make provision for the type of assistance it could provide.

Reception Plans - All communities which are not designated as probable target areas should develop plans for the reception of evacuees. Evacuee situations may arise as a result of pre-attack evacuation of probable target areas, evacuation of uninjured survivors of an attack, or remedial evacuation.

Public Information - Each level of government is responsible for this phase of survival planning. In the case of municipalities, the public must be informed of the municipal plan for survival.

By developing programmes on the aforementioned range of measures, effective survival plans will be developed. The linking of these plans with the plans for the continued operation of government will ensure that Canada could survive a nuclear war.



WILL A NUCLEAR EXPLOSION KILL EVERYTHING WITHIN A SPECIFIED RANGE?

Nuclear weapons, like any explosive device, are limited in what they can do. Unless someone specifies a specific yield of a weapon, no one can predict exactly what will happen. In discussing nuclear weapons and their effects, generalities are frequently false. For example, in the case of a five megaton weapon, the range of extreme blast damage is in the order of fifteen miles, but this does not mean that everybody within that range will be killed. In fact, with relatively simple precautions such as sufficient warning to enable the population of an area to get into ordinary basements, a large number of people would survive these blast effects who would otherwise be killed. However, if one does survive the immediate effects of blast, he still must be prepared to contend with the effects of radiation fallout, but the means of protection against this hazard are surprisingly simple.

IS IT TRUE THAT THE AMOUNT OF DEVASTATION WHICH WOULD BE WROUGHT WOULD MAKE IT USELESS TO WANT TO LIVE AFTER ATTACK?

It is true that the devastation which would be caused by nuclear detonations would be great. However, the physical effects of the explosion are limited to the immediate area of the explosion. Cities such as Hiroshima, Nagasaki and Hamburg were destroyed but they have been rebuilt. Additionally, there would be extensive areas in the country which would be unaffected by the attack and which will ensure a capability of surviving under reasonable conditions.

EMERGENCY SUPPLY PLANNING

By J. C. Morrison

Director

Emergency Supply Planning Branch (DDP)

On May 9, 1960, an Emergency Supply Planning Branch was established within the Department of Defence Production, under Cabinet authority, to undertake the planning and other arrangements necessary to permit a War Supplies Agency to come into existence immediately on the outbreak of a nuclear war and begin at once to operate effectively.

The Emergency Supply Problem

If Canada should ever be subjected to nuclear attack, the provision and distribution of essential commodities and services for both military and civilian purposes would immediately become a very serious and extremely difficult problem.

There would be need immediately for food, including special foods for infants; fuel, particularly for transportation; materials for human use especially clothing, shoes and blankets; repair materials and equipment for repairing such essential things as railways, public utilities, communications facilities, and roads. Following the immediate shock of attack, to permit a start to be made on the task of rehabilitating homeless and destitute people, there would be urgent need for such additional things as simple building materials and tools, heating and electrical supplies, furniture, and household appliances.

Many of these vitally needed supplies could become scarce immediately after a nuclear attack, for a variety of reasons some would be destroyed. The normal distribution system could be dislocated by the dispersal of people or by the disruption of transportation and communications. Areas normally supporting only a small number of people might suddenly be inundated by refugees from target areas. There would be some tendency for people to buy all available supplies and hoard them. Imports might cease altogether, or at least might be seriously curtailed.

The essential survival needs of the population during the first few weeks after a nuclear attack will probably have to be met in the

main from surviving stocks of ready-to-use items rather than from the normal productive capacity of the country. Agricultural production would probably continue in many areas, and industrial production might continue in some parts of the country; but most manufacturing and food processing, which tend to become concentrated in the large cities, could virtually cease for a time. Production in areas not directly affected or threatened by attack would be in danger of stopping before long for lack of materials or spare parts, or because of the widespread dislocation of transportation, communications, and financial arrangements. Any failure of electric power supply, because of damage or other reasons, would have immediate repercussions on production.

It might be noted, finally, that the foregoing difficulties of supplying the population with the basic necessities of life after a nuclear attack are likely to be further complicated by the presence of radioactive fallout, which could make surviving stocks of commodities and surviving production facilities inaccessible or unusable in many places for varying lengths of time, and could seriously delay essential repairs to supporting services.

Functions of a War Supplies Agency

In view of these probable circumstances, it is considered essential that responsibility for decisions with respect to emergency supplies for both military and civilian purposes should rest unequivocally with a single agency, at least during the early intense period of nuclear war. These decisions would have to be taken quickly, and the absence of clear-cut authority to take them, or any necessity to settle issues through committees or inter-departmental discussions, would result in delays which might have the most serious consequences.

This single agency, to be known as a War Supplies Agency, will have no functions in peacetime. It would be brought into existence immediately on the outbreak of a nuclear war, presumably by Order-in-Council under the War Measures Act, and would then be charged with full responsibility for all aspects of control over the production, distribution, and pricing of supplies, both civil and military, other than production on the farm and the catching and landing of fish. Responsibility for farm production and fishing activities would remain with the Departments of Agriculture and Fisheries, respectively.

Within this general responsibility, the War Supplies Agency is envisaged as having the following specific functions, not necessarily in order of priority:

- (a) Post-attack assessment of surviving resources, to determine the availability of food, fuel, ready-to-use survival materials of various kinds, production facilities, raw and semi-processed materials, and so forth.
- (b) Assessment of supply requirements, based on claims submitted by other government departments and agencies; comparison of requirements with availabilities; reconciliation of competing claims; and establishment of priorities as required.
- (c) Arrangements for bulk redistribution of food, fuel, survival materials and other essential commodities.
- (d) Regulation of all internal and external trade to whatever extent commercial activities may remain possible in the country as a whole or various parts of it, with respect particularly to rationing, price control, foreign trade, and accommodation.
- (e) Procurement by purchase, requisition, or other means of all goods and services required by Government for civil or military purposes.
- (f) Control of industrial production, including the allocation of raw and semi-processed materials.
- (g) Determination of general questions of policy with respect to the production and distribution of supplies under nuclear war conditions.

Organization of a War Supplies Agency

The structural organization of a War Supplies Agency must necessarily conform to the arrangements being made through the Emergency Measures Organization for a decentralized system of emergency government. The War Supplies Agency will thus have central, regional and possibly local elements, and each element will be responsible for those aspects of the Agency's functions that are appropriate to its level of authority. It merits notice, also, that as but one component of the total emergency government structure, the War Supplies Agency as a whole, and its various elements, will have to work in very close co-operation with all the other components of emergency government federal, provincial, or municipal, that are directly or indirectly concerned in the problem of emergency supply.

The responsibilities that would devolve upon the War Supplies Agency in the event of a nuclear attack are in peacetime divided among a number of federal departments and agencies, notably the Departments of Defence Production, Trade and Commerce, Agriculture and Fisheries, Mines and Technical Surveys, the National Energy Board and the Dominion Coal Board. It is intended, therefore, that the staff of the central or national element of the War Supplies Agency should be a composite one, drawn in the main from the Ottawa offices of the foregoing departments and agencies with peacetime responsibilities and expert knowledge in the supply field.

Persons to comprise the regional and any necessary local elements of the War Supplies Agency would be drawn to some extent from the existing field staffs of these same departments and agencies. At the regional and local levels, however, it will also be necessary to recruit qualified persons from business, industry, and other fields, on a "stand-by" basis. It is the intention also that the persons needed to staff a War Supplies Agency during the initial stages of its operation will be selected and briefed in peacetime and given some opportunity through exercises of various kinds to gain experience of their wartime responsibilities.

Functions of the Emergency Supply Planning Branch

As mentioned earlier, the Emergency Supply Planning Branch has been created to make the peacetime preparations necessary to permit the War Supplies Agency to begin to operate effectively immediately after a nuclear attack.

This general responsibility of the Branch involves the following specific functions:

- (a) Preparation of the basic plan for a War Supplies Agency, with particular reference to:
 - (i) Measures required to ensure a supply of food, energy and materials essential for civil and military purposes;
 - (ii) The procurement, distribution and price control of particular commodities and services;
 - (iii) The organizational structure and staffing of the Agency;
 - (iv) The legal instruments necessary to permit effective control over essential supplies;

- (v) The collection and tabulation of the data required on major stocks of essential commodities, production facilities, and so forth, to permit a rapid post-attack calculation of surviving resources.
- (b) Within the framework of this basic plan, co-ordination of the detailed planning which must be done by the other branches of D.D.P. and the other departments and agencies of government involved in the staffing and operation of the War Supplies Agency;
- (c) Detailed planning with respect to those aspects of the basic plan for a War Supplies Agency that do not fall clearly within the peacetime responsibilities of other branches of D.D.P. or other departments;
- (d) Liaison with the Emergency Measures Organization, other federal departments and agencies with direct or indirect interest in emergency supply problems, and with appropriate provincial authorities in consultation with the regional officers of the Emergency Measures Organization.

Organization of the Emergency Supply Planning Branch

To perform these functions, the Emergency Supply Planning Branch now has a small staff of eight officers in Ottawa - the Director, Administrative Assistant to Director, Food Administrator, Energy Administrator, Trade Administrator, Materials Administrator, Procurement Administrator and Economist. The duties of these officers are largely explained by their titles, but it might be noted that the "Administrators" are in fact planning officers and that the Economist is largely concerned with the development of research programmes designed to produce the large amount of statistical data required for planning purposes.

By the end of 1960, it is hoped also to have Regional Officers of the Branch at work in British Columbia, the Prairie Provinces, Ontario, Quebec, and the Atlantic Provinces, with Headquarters in Victoria, Winnipeg, Toronto, Montreal and Halifax. It is intended eventually to have at least one Regional Officer of the Emergency Supply Planning Branch in each province.

Each Regional Officer will be responsible for the following duties:

- (a) Co-ordinating within his region the development of federal plans initiated by the Emergency Supply Planning Branch for the control of production, distribution and pricing of supplies that would be required following a nuclear attack.
- (b) Developing and maintaining effective liaison with other federal agencies in the region involved in emergency planning and with provincial authorities concerned with emergency supply arrangements.
- (c) Conducting surveys, compiling information, and reporting on regional emergency supply problems as required by the Headquarters staff.
- (d) In consultation with the Regional Officers of the Emergency Measures Organization, and with provincial and municipal authorities as appropriate, making the physical and other arrangements necessary to permit the regional and local elements of the War Supplies Agency to discharge their functions in an emergency.

The staff of the Emergency Supply Planning Branch would be incorporated in that of the War Supplies Agency to ensure continuity between planning and operations.

Planning Programme

Planning priority is being given to the development of an interim plan designed to make the best use of material resources already available, or obtainable immediately on the outbreak of war, to meet the minimum basic supply needs of the country during the first few weeks after any nuclear attack, defined for planning purposes as the Shock Phase.

This interim plan has three major objectives:

- (a) Development of an organizational framework for the War Supplies Agency in sufficient detail to permit the selection of at least a skeleton staff, on a stand-by basis, to man the central and regional elements of the Agency, and if possible a number of local offices, against the possibility of an emergency developing before long term plans can be completed.
- (b) Collection as rapidly as possible of inventory data on major

stocks of food, fuel and essential survival materials; and tabulation of this data in a form suitable for post-attack damage analysis purposes;

- (c) Drafting of the legal instruments necessary to permit effective control and use of commodities and production facilities that might survive a nuclear attack.

Conclusion

In concluding this article, one further thought might be appropriately added, applicable to all civil emergency planning. The present necessity of being prepared not only militarily but also on the civil side for the possibility of nuclear war breaking out with little or no warning seems likely to remain a necessity for many years to come. The necessary planning will be done and resulting plans kept up-to-date only if all those concerned recognize that this kind of work is no longer transitory in nature but rather has become one of the normal peacetime responsibilities of governments and citizens alike.

WHEN WILL PEOPLE BE TOLD TO LEAVE SHELTERS?

An emergency broadcasting plan is presently being developed to ensure that radio broadcasting instructions from provincial authorities can be given during a period of national emergency. The population is being advised that they should take into their shelters a battery-operated radio by which they will be able to hear instructions for the full period of time they are likely to have to remain under cover. Those who do not choose to have a battery-operated radio are advised to stay under cover until instructed to come out. This is another reason why a fourteen day supply of food is recommended.

FALLOUT SHELTER DISPLAYS

Many municipal authorities probably are contemplating future basement fallout shelter displays. Some of the more common questions asked at displays in the past have concerned protection, ventilation, space, sanitary arrangements, food and water supplies and period of occupancy.

To assist demonstrators in answering such questions from the public, we have compiled a brief list of questions and answers. It would be helpful to have this list available as hand-out material at displays to be distributed in conjunction with post cards, coupons or the like.

Protection

Q. What kind of protection does this shelter give me and my family?

A. The shelter has been designed to give adequate protection in the basement of a light stud-frame construction house. In this type of construction, it will have a protection factor of approximately 100.

It will not give protection against blast or fire.

There is no requirement to install filters in the ventilation system. Fallout dust will not normally penetrate to the basement if the doors and windows of the house are closed in the normal way. If a small amount of fallout dust should get in, it will still be insignificant in relation to the gamma radiation penetrating the walls from outside.

Ventilation

Q. How do we get air into the shelter?

A. With this type of shelter, there is no requirement for forced air ventilation. The normal air circulation is induced by the heat emanating from the occupants, cooking, lighting and the shelter heater, if required; and is controlled by means of the curtain hung across the doorway.

The use of one gallon of fuel per day for cooking and heating will not induce any harmful effects, either by way of oxygen depletion or combustion products.

A certain amount of odours will be carried away in the circulating air but even when this is not complete, it has been found by experience that after relatively few hours in the shelter, the sense of smell becomes dulled and odours tend to be imperceptible.

Space

Q. How much room is there in the shelter?

A. The shelter is designed to provide 80 cubic feet of free air space per person and 12 square feet of floor space per person. It also includes adequate storage space for food supplies and water supplies for the first 48 hours.

The shelter displayed is for any size of family up to 5. For 5 persons, one double-tier and one triple-tier bunk are recommended and these should be supplied with hinged backs so that they can be used as seating accommodation during the daytime.

Sanitary Arrangements

Q. What facilities are there for sanitation?

A. Toilet is of the bucket type in which polyethylene bags are used to dispose of waste matter. These should be tied at the neck and placed in the garbage can in the entrance way.

Other waste matter from cooking, leftover scraps of food, etc., should be similarly disposed of in polyethylene bags in the garbage can.

Arrangements for disposal of waste water must be made either to the existing basement drainage or once again, by placing in lidded cans until it can be disposed of.

Food and Water

Q. How much food and water should we store?

A. The food displayed is the type recommended by the Department of National Health and Welfare for 5 people for 14 days and is considered to be the minimum necessary for 5 people, providing a reasonable variation in menu. Additional food could be stocked, if desired, and provided that it is non-perishable.

A minimum of one gallon per day of water necessitates a great deal of storage space, it is therefore recommended that water only for the first 48 hours be stored within the shelter. After 48 hours, it is anticipated that the outside radiation will have dropped to a sufficiently low level to permit visits to other parts of the basement to get water from water tanks and previously filled wash tubs. Water and food will not be contaminated by radiation.

Period of Occupancy

Q. How long would we have to stay in the shelter?

A. The shelter will be occupied on the receipt of a fallout warning. It will not be vacated until instructions have been issued by local civil defence authorities. While the shelter is stocked for an occupancy of 14 days, it is anticipated that in some areas, personnel may be released from shelter after a relatively short period of time while, in others, it may be necessary to occupy the shelter for the full period. Only local radiation conditions will establish the period of occupancy and this, therefore, cannot be pre-determined. It is essential that some form of battery-operated radio is available and working within the shelter so that instructions may be communicated to the occupants. In most cases, it may be possible to permit short visits to the basement and even to other parts of the house after the first 48 hours but these too will form the subject of instructions broadcast over the emergency broadcasting system.

CONTROL OF RADIO TRANSMISSIONS AND EMERGENCY BROADCASTING

by
K.E. Holmes
Communications Officer
Emergency Measures Organization

The need for the control of radio transmissions arises out of the fact that certain radio transmissions are used as navigational aids by aircraft and other radio transmissions could be of assistance. As a result, a US/Canada agreement was arrived at in 1952 for the control of such radio transmissions in war, such transmissions to be silenced or operated in accordance with plans to deny their use as a navigational aid.

Particular attention has to be paid to the amplitude modulated (AM) sound radio broadcasting transmitters as they operate on frequencies that lie between two of the most important aircraft navigational aids and operate, in many cases, on high power. These bands are:

DECCA	70 to 130 kc/s
AM broadcasting	540 to 1600 kc/s
LORAN	1800 to 2000 kc/s

The US plan for AM broadcasting is known as CONELRAD and under this plan, when an Alert is ordered, all normal broadcasting ceases and selected AM stations broadcast on 640 and 1240 kc/s only.

When the US CONELRAD plan was first introduced, it was considered for Canada but was not found practicable because only in a few areas were there sufficient transmitters to make the plan workable.

The question of the need for such strict control of radio transmissions has been under discussion between the US and Canada. Some considerations are:

- (a) Modern methods of air navigation have so improved that it is considered unlikely that an enemy would use radio transmissions as a navigational aid.
- (b) There is increasing emphasis on missiles, which are also unlikely to use radio transmissions for guidance.
- (c) There are radio transmissions which have to remain in operation for our own purposes, such as navigational aids and radar stations.
- (d) Any risk involved must be balanced against the need for communicating with the public, who must be kept informed of the situation and advised as to any action they should take.

Until the question of the need for control is resolved, the Canadian position is that a plan must be ready for an emergency. An interim plan has been produced under which normal broadcasting is closed down and an emergency broadcasting system comes into operation; this would employ about half of the total number of AM stations. In ad-

dition, these stations will not identify themselves by call sign or location.

Further study is being given to the problems of broadcasting in an emergency because:

- (a) Stations will be destroyed if in areas under attack.
- (b) Radioactive fallout will affect large areas and personnel will be unable to remain and operate unless protection is provided.
- (c) Power supply will be disrupted in many areas and auxiliary power supply may have to be provided.
- (d) Programme networks may be disrupted and emergency communications may have to be provided to key transmitters.

Finally, no broadcasting plan is complete unless citizens have suitable receivers. Because of disruption of power supply, battery-operated receivers are essential. These receivers should be capable of good performance because the nearest station may be out of operation and they may have to receive a station 50 miles away. A battery-operated receiver is an essential item to be taken into any kind of shelter.



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